AN UNSUSPECTED AMELOBLASTOMA IN THE SUBPONTIC REGION OF THE MANDIBLE WITH CONSIDERATION OF PATHOGENESIS FROM THE RADIOGRAPHIC COURSE

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Abstract
The purpose of this report is to document a case of unsuspected ameloblastoma involving the right mandibular subpontic region in a 38-year-old Cambodian female patient. This lesion was purportedly preceded by multiple radiolucencies which were diagnosed as radicular cysts and treated a few times in the past years by enucleation followed by endodontic therapy of the affected teeth. Bridgework restoration of the partially edentulous area was performed. This case report demonstrates radiographic changes that occurred in the periods before and after the diagnosis of ameloblastoma. The case may represent an example of radicular cysts and ameloblastoma occurring as a collision phenomenon, or the ameloblastoma may have arisen as a result of neoplastic transformation of the lining epithelium in an inflammatory odontogenic epithelial cyst.

Key words: unsuspected ameloblastoma, cystic ameloblastoma, small ameloblastoma, radicular cyst, odontogenic cyst, neoplastic transformation

INTRODUCTION

The World Health Organization defined ameloblastomas as a slowly-growing, locally-invasive odontogenic epithelial neoplasm [1]. It is the second most common odontogenic tumor occurring without gender predilection and affecting a wide age range. The clinical, radiological and histological features of this neoplasm have been well-characterized [1, 2]. The general consensus is that the ameloblastoma originates in the enamel organ and its derivatives as well as in the epithelial lining of developmental odontogenic cysts [1, 3]. Reports of ameloblastoma arising as a consequence of neoplastic transformation of the lining epithelium in an inflammatory odontogenic cyst are virtually unknown.

In this report, we present a case of ameloblastoma, which may represent an example of radicular cysts and ameloblastoma occurring as a collision phenomenon, or perhaps the ameloblastoma arose as a result of neoplastic transformation of the lining epithelium in an inflammatory odontogenic epithelial cyst.

CASE REPORT

History of present complaint: In January 2007, a 38-year-old Cambodian female patient presented to the Department of Oral Surgery, Faculty of Dentistry, University of Health Sciences, Phnom Penh, Cambodia, with a complaint of painful swelling with pus discharge from her right lower jaw for the past one month.

Past dental history: The patient gave a history of removal of cysts from the same site a year earlier. According to the dentist attending to the patient, cystic lesions which looked clinically like radicular cysts were removed a few times. Based on the histopathological report of the specimens, the diagnosis was ‘an inflammatory odontogenic cyst, most probably a periapical cyst (radicular cyst)’. However, these lesions kept recurring at the same site but seemed to have reduced in size following the last surgery. During the same period, the patient underwent endodontic treatment of her left mandibular central incisors, right mandibular central and lateral incisor, and right mandibular first premolar. Ceramic restorations of her right mandibular lateral incisor, right mandibular first premolar and right mandibular second premolar as well, as bridgework replacing missing right mandibular canine and right mandibular second premolar and first molar, were also constructed. Her most recent history was of a painful swelling over the same area one month earlier, which improved after a course of antibiotics.

Clinical examination: Introral examination revealed a fluctuant swelling with buccal bony expansion over the right mandibular premolar-molar region and extending anteriorly along the labial alveolus. A discharging sinus was seen in the buccal mucosa between the right and left mandibular central incisors.

Radiographic examination: Orthopantomogram taken in 2006 showed a well-defined unilocular radiolucency located in the partially-edentulous body of the mandible, i.e. between the right mandibular first premolar and second molar (Fig. 1A). The radiolucency had mildly scalloped, sclerotic margins, and fine bony septa...